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Recent developments in steelmaking capacity

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The OECD Steel Committee delegates discussed a draft of the report at the Steel Committee meeting on 5-6 March 2018 and have approved it for declassification following comments from delegates which are reflected in this document. The report and the underlying data on steelmaking capacity for all steel producing economies will be made available on the Steel Committee website: oe.cd/steelcapacity and on O.N.E. under the reference code: DSTI/SC(2018)2/FINAL.

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Recent developments in steelmaking capacity

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ABSTRACT

The Secretariat of the OECD Steel Committee provides monitoring reports on crude steelmaking capacity developments on a regular basis, using a wide range of publicly available and commercial data sources. This paper presents an updated overview of regional capacity trends, including an assessment of gross capacity additions in the period until 2020. Global steelmaking capacity (in nominal crude terms) has decreased for the second consecutive year to a level of 2 251.2 million tonnes in 2017. The decline in global steelmaking capacity in 2017 follows a deceleration in capacity growth since 2013 and results from capacity reductions and slower capacity growth in OECD/EU economies and non OECD/EU economies. However the modest reduction in 2017 (-1.3%) still falls short of alleviating global excess capacity. Moreover, the updated information on announced investment projects suggests that nearly 52 million tonnes of gross capacity additions are currently underway and could come on stream during the three-year period of 2018-20. An additional 39 million tonnes of capacity additions are currently in the planning stages for possible start-up during the same time period. The Middle East region is expected to experience a considerable increase in steelmaking capacity over the next few years, while many capacity additions are also planned in Asia. The information on announced investment projects also suggests that the CIS region, Latin America and Africa are regions where steel-making capacity could increase somewhat in the coming years.

Table of contents

Recent developments in steelmaking capacity	3
1. Summary of the latest steelmaking capacity developments.....	5
2. Latest developments of global steelmaking capacity	6
3. A review of regional capacity developments, closures, postponement and cancellations	9
Annex A. AVAILABLE EVIDENCE OF PLANT LEVEL INVESTMENTS.....	14
Annex B. AVAILABLE EVIDENCE OF PLANT LEVEL CLOSURES	20
Annex C. STEELMAKING CAPACITY DATA BY ECONOMY.....	23
Annex D. WORKING DEFINITION USED.....	27
References	29
Endnotes	31

Tables

Table 1. Current nominal capacity and potential gross capacity additions by region	7
Table A1. Investment data.....	14
Table A2. Closure data	20
Table A3. Crude steelmaking capacity developments (in mmt)	23

Figures

Figure 1. Evolution of crude steelmaking capacity in OECD/EU economies and non OECD/EU economies.....	6
Figure 2. Global crude steelmaking capacity and crude steel production	8

1. Summary of the latest steelmaking capacity developments¹

The Secretariat of the OECD Steel Committee provides monitoring reports on crude steelmaking capacity development to members of the Committee on a regular basis. This paper presents an updated overview of recent steelmaking capacity developments taking place around the world and provides an assessment of gross capacity additions that could come on stream during the three-year period of 2018-20. The document also includes a brief summary, by region, identifying closures of capacity and investment projects, including any postponements and cancellations of announced projects where applicable.

The latest available data suggest that global steelmaking capacity has decreased for the second consecutive year in 2017. However this modest adjustment (-1.3%) still falls short of alleviating global excess capacity. Moreover, a number of new investment projects continue to take place around the world and global steelmaking capacity could increase by +2.3% between 2018 and 2020 in the absence of any further closures. Global excess capacity is expected to continue to be a major challenge for the global steel industry.

Conditions in steel markets are changing rapidly with several developments in steelmaking capacity, on both the investment and closure side. The Secretariat monitors capacity developments on an ongoing basis and updates capacity numbers with incoming publicly available information on capacity closures and new information on the status of investment projects. The information used to assess capacity developments has been obtained from a wide range of publicly available and commercial data sources. The figures presented in this document are based on data available until December 2017.

Box 1. OECD Steelmaking Capacity database

The OECD Steelmaking Capacity database contains data on crude steelmaking capacity by economy and provides researchers and policymakers with an important tool for analysing steel capacity developments. The database will be updated to reflect newer information provided in this paper, extending until December 2017.

The OECD Secretariat compiles steelmaking capacity data using a wide range of publicly available and commercial data sources. These data sources include government sources, commercial capacity databases, specialised media reports, and company information. The data are reviewed periodically by the OECD Steel Committee. Capacity figures are in terms of nominal crude steelmaking capacity. The data refer to maximum theoretical equipment capacity. This definition does not take into account yield losses, maintenance and other factors affecting the productivity of installed steelmaking equipment. Therefore, these steelmaking capacity figures provided should neither be regarded as effective capacity nor as production. The annual capacity figures reflect all existing steelmaking capacity at the end of a calendar year.

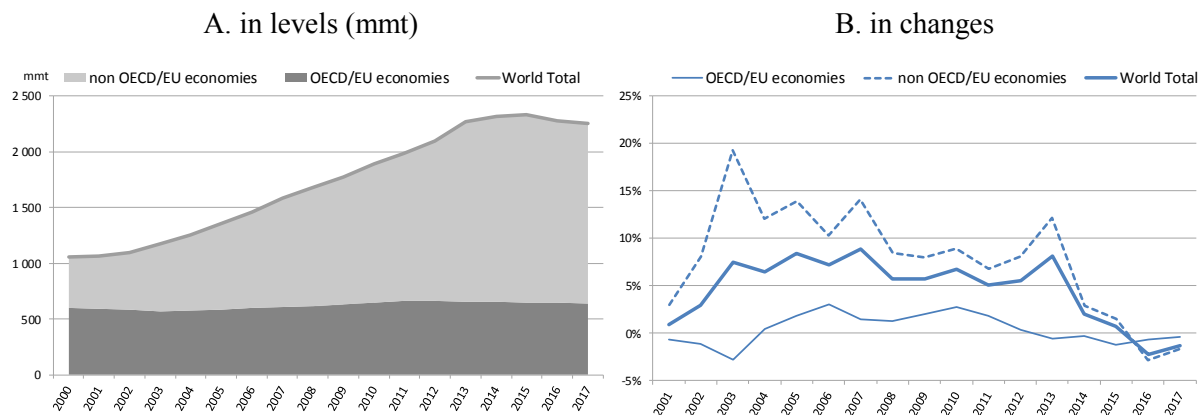
The OECD Steelmaking Capacity database as well as recent reports on steelmaking capacity developments are available at the OECD Steelmaking Capacity portal at: oe.cd/steelcapacity

2. Latest developments of global steelmaking capacity

2.1. Global summary of steelmaking capacity

The latest available information (as of December 2017) suggests that global steelmaking capacity (in nominal crude terms) has decreased for the second consecutive year in 2017 (Figure 1). The OECD has revised down its 2016 and 2017 figures for world steelmaking capacity from 2 369.7 million metric tonnes (mmt) and 2 356.5 mmt to 2 280.7 mmt and 2 251.2 mmt, respectively for 2016 and 2017, to incorporate closures and investments that were not taken into account previously.² The decline in global steelmaking capacity in 2017 follows a deceleration in capacity growth since 2013 and results from capacity reductions and slower capacity growth in both OECD/EU economies and non OECD/EU economies (Figure 1. B).³

Figure 1. Evolution of crude steelmaking capacity in OECD/EU economies and non OECD/EU economies



Note: Capacity data reflects all information on changes up to December 2017. The European Union (EU) is a member of the Steel Committee and accordingly this data includes all EU Member States.

Source: OECD

2.2. Regional capacity developments

2.2.1. Latest developments

Table 1 provides OECD data on existing nominal crude steelmaking capacity in 2016 and 2017, taking into account new information on capacity additions and closures available up to December 2017. The largest capacity additions have been in the Middle East region, where an additional 2.8 mmt of capacity (+4.6%) was deployed in 2017. The updated capacity estimates suggest a 2.1% net reduction in Asia, and 0.5% net reduction in Europe in 2017. In 2017, steelmaking capacity increased by 2.3% in Africa, 0.9% in Latin America and 0.2% in the North American Free Trade Agreement (NAFTA) region. In the Commonwealth of Independent States (CIS) and Oceania regions, there were no new investments underway, nor were permanent closures observed during 2017 from the publicly available sources used to update the OECD's capacity monitoring databases.

Table 1. Current nominal capacity and potential gross capacity additions by region

	Existing nominal capacity(mmt)		% change expected	Potential gross capacity additions in 2018-20 (mmt)		Capacity in 2020 (mmt)		% change expected (2017 vs 2020)	
	2016	2017 (A)		2017-2016	Underway (B)	Planned (C)	Low (A)+(B)	High (A)+(B)+(C)	Low
Asia	1 521.6	1 488.9	-2.1%	18.7	23.7	1 507.6	1 531.3	1.3%	2.9%
CIS	145.7	145.7	0.0%	2.1	0.6	147.8	148.4	1.4%	1.9%
Latin America	75.3	75.9	0.9%	1.6	1.4	77.5	78.9	2.0%	3.9%
Middle East	60.9	63.7	4.6%	23.0	8.5	86.7	95.2	36.1%	49.5%
Africa	35.7	36.6	2.3%	5.9	2.6	42.4	45.0	16.0%	23.1%
Europe	276.6	275.2	-0.5%	0.0	2.0	275.2	277.2	0.0%	0.7%
NAFTA	158.5	158.9	0.2%	0.6	0.0	159.5	159.5	0.4%	0.4%
Oceania	6.4	6.4	0.0%	0.0	0.0	6.4	6.4	0.0%	0.0%
OECD/EU Economies Total	644.7	642.3	-0.4%	0.6	2.0	642.9	644.9	0.1%	0.4%
Non OECD/EU Economies Total	1 635.9	1 608.9	-1.7%	51.3	36.8	1 660.2	1 697.0	3.2%	5.5%
World Total	2 280.7	2 251.2	-1.3%	51.87	38.83	2 303.1	2 341.9	2.3%	4.0%

Note: Capacity data reflects all information on changes up to December 2017 as well as input provided by OECD Steel Committee delegates following the discussion of a draft version of this report presented at the Steel Committee meeting on 5-6 March 2018. In the table, "Europe" includes both OECD/EU economies and non OECD/EU economies in Europe, as well as Turkey. Please see Annex C for the detailed capacity data by economy. The European Union (EU) is a member of the Steel Committee and accordingly this data includes all EU Member States.

Source: OECD.

2.2.2. Gross capacity additions for 2018-2020

Even though the global steel industry is currently facing significant excess capacity, gross capacity additions are taking place in various regions of the world. Information on announced investment projects suggests that nearly 52 mmt of gross capacity additions are currently underway and could come on stream during the three-year period of 2018-20, while an additional 39 mmt of capacity additions are currently in the planning stages for possible start-up during the same time period (Table 1).

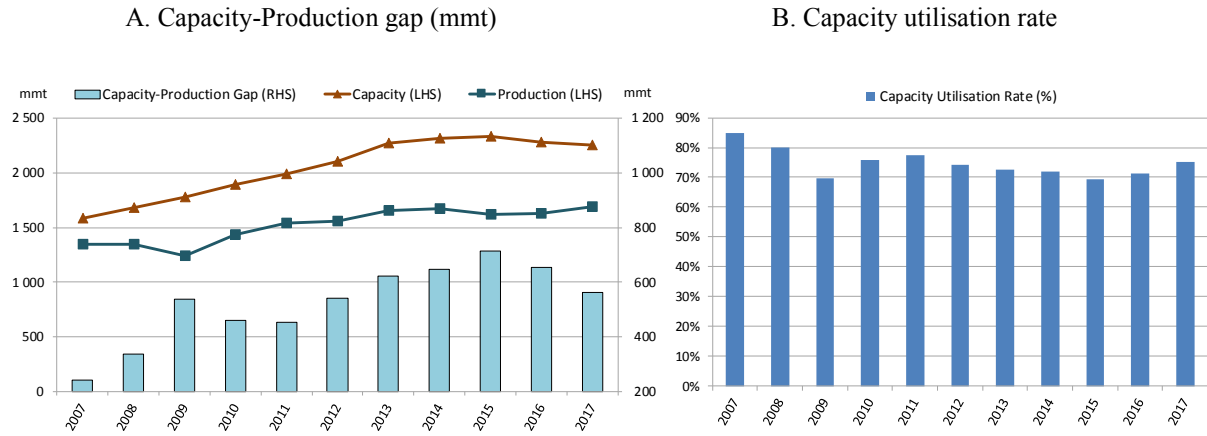
The Middle East region is expected to experience a considerable increase in steelmaking capacity over the next few years, with around 31.5 mmt of gross capacity additions currently underway or planned for start-up during 2018-20. Many capacity additions are also planned in Asia (almost 24 mmt), with around 19 mmt currently underway for completion in the next three years. The CIS region, Latin America and Africa could also see increases in capacity, with around 2.1 mmt, 1.6 mmt, and 5.9 mmt of gross additions currently underway in each region, respectively, for the 2018-20 period. In NAFTA region, a 0.6 mmt capacity increase is underway. No capacity additions are currently underway in Europe and Oceania.

2.3. The global excess capacity situation

The reduction in global crude steelmaking capacity in 2017 (- 1.3 %) has contributed to narrowing the gap between global capacity and production, which is now estimated at around 561 mmt (Figure 2 A). The global steelmaking capacity utilisation rate,

measured as production divided by capacity has increased from 71.3% in 2016 to 75.1% in 2017.

Figure 2. Global crude steelmaking capacity and crude steel production



Source: OECD for crude steelmaking capacity and World Steel Association for production.

3. A review of regional capacity developments, closures, postponement and cancellations

3.1. Middle East

Steelmaking capacity has increased rapidly over the last few years in the Middle East region, from around 24 mmt in 2007 to almost 63.7 mmt in 2017. Most of the newly installed steelmaking equipment in the region uses electric arc furnace (EAF) technology, reflecting natural endowments of natural gas used to produce direct reduced iron (DRI). Growth is expected to continue over the next few years and steelmaking capacity in the region could increase from 63.7 mmt in 2017 to 86.7 mmt in 2020 (+36.1%), with Iran likely to be the largest contributor to the steel industry's expansion.

The Iranian government has announced plans to increase national steelmaking capacity to 55 mmt by 2025, and there are a number of investment projects, either underway or in the planning stages, taking place in Iran's steel industry (IMIDRO, 2016^[11]). If all the projects that are currently underway are completed as scheduled, Iran's nominal crude steelmaking capacity would reach 52.8 mmt by 2020, up from 28.2 mmt in 2016. Although steel demand prospects have been interesting for some foreign investors — e.g. the Chinese Metallurgical Group Corporation (MCC) has announced to finance some of the capacity projects — Iran has been experiencing difficulties in attracting the necessary investment to achieve the target of 55 mmt of steel production capacity by 2025. Elsewhere in the region, Moon Iron & Steel (MISCO) of Oman is building a 1.2 mmt EAF plant, which is expected to be operational in 2018.

3.2. Asia and Oceania

Steelmaking capacity in Asia has decreased from 1 521.6 mmt in 2016 to 1 488.9 mmt in 2017 (-2.1%). However, in the absence of additional closures, steelmaking capacity in the region could increase again to 1 507.6 mmt between 2018 and 2020 (+1.3 %). In Oceania, there are no new investments underway, nor were permanent closures observed during 2017 from the publicly available sources used to update the OECD's monitoring databases.

Between 2006 and 2015, Chinese steelmaking capacity more than doubled, from 488 mmt to 1 150.1 mmt. However, capacity has started to decline more recently, falling by around 60 mmt in 2016 from the previous year. Moreover, a target was set for reducing steelmaking capacity by an additional 50 mmt in 2017 as part of the 100-150 mmt closure target set for the period until 2020 by National Development and Reform Commission (NDRC) (NDRC, 2017^[21]) (MIIT, 2016^[31]).⁴ According to the Ministry of Industry and Information Technology (MIIT), the People's Republic of China (hereafter "China") steel capacity closures in 2017 actually exceeded 50 mmt (MIIT, 2018^[41]).

China has also started closing down outdated induction furnaces (IF). MIIT reported that 140 mmt of induction furnace (IF) capacities were eliminated in 2017 (MIIT, 2018^[41]) (Platts, 2017^[51]).⁵ It is important to note that IF is not captured in official statistics and the closure of IF is additional to the 100-150 mmt closure target for the period through to 2020.⁶

There are some new capacity investments projects in China. Shandong Iron & Steel is building an 8.5 mmt plant in Rizhao, Shandong province. In the context of Shougang Jingtang's investment project in Caofeidian port, Hebei province, the company has started a second phase that entails an additional 5 mmt of steelmaking capacity. These new mills are designed to produce high value-added products to meet demand for flat products in the automotive and home appliance industries in China.

Steelmaking capacity in India has been expanding at a fast rate in recent years and there are several new investment projects underway. Capacity is estimated to have increased to almost 122 mmt in 2016, more than double the level of 56 mmt in 2006. Further growth is expected over the short and longer term. For example, in late 2017, Jindal Steel and Power Ltd. (JSPL) completed the commissioning of a new basic oxygen furnace (BOF) at its Angul plant in the state of Odisha. The National Mineral Development Corporation (NMDC) is constructing a greenfield steelworks in the state of Chhattisgarh, while Steel Authority of India Ltd. (SAIL) is expanding steelmaking capacity at its Bhilai plant, both projects of which are expected to be operational in 2018. In addition, Shree Uttam Steel and Power Ltd. is constructing a greenfield plant in Maharashtra, which is expected to start operations in 2019. As a result of its rapid capacity expansion, India could become the world's second largest steel producer over the next few years.

On 8 May 2017, the Ministry of Steel of India published the "National Steel Policy 2017" (hereafter the NSP 2017) (Ministry of Steel of India, 2017_[6]). According to the NSP 2017, India's authorities expect that 300 mmt of domestic crude steelmaking capacity would be required in the economy by 2030-31, based on its demand projections. These expectations assume that most of the projected additional demand for steel would need to be satisfied by domestic steel production. However, attaining such a level of production capacity would entail an additional 175.2 mmt from the 124.8 mmt level in 2017 (+140%) and the NSP notes that this would require an extensive mobilisation of natural resources, finances, manpower and infrastructure (including land).

Steelmaking capacity has expanded rapidly in the Association of South East Asian Nations (ASEAN) over the past decade and there are many steel projects being planned, particularly in Viet Nam. Steelmaking capacity in the ASEAN region has increased from 48.7 mmt to 55.7 mmt between 2016 and 2017 (+14.4 %).

Formosa Ha Tinh Steel has started operating a new BOF with a capacity of 7.0 mmt in Ha Tinh province, Viet Nam in 2017 (Formosa Ha Tinh Steel, 2017_[7]). Other projects include the Gunung Steel Group's installation of a 0.5 mmt EAF in North Sumatra, Indonesia, and SteelAsia Manufacturing Corporation's 0.8 mmt EAF in Bulacan, Philippines, which are expected to become operational in 2018. In addition, solid steel demand growth has attracted many foreign investors to the South East Asian region and there are several new investment plans supported by Chinese companies. For example, Alliance Steel, which is funded by Chinese companies, is building a greenfield integrated steel mill with a capacity of 3.5 mmt in Kuantan Industrial Park, Malaysia, with commissioning expected for 2018. The construction of several large BOF plants are also being planned in Viet Nam, which would support capacity growth in the region in the coming few years.

Elsewhere in Asia, Bangladesh and Pakistan have enjoyed strong steel demand growth in recent years, and several projects to build new steel mills are underway. In Bangladesh, GPH Ispat Ltd. and Kabir Group of Industries are constructing new EAF

mills, with a total of 1.3 mmt of capacity expected to become operational in 2018. In Pakistan, Amreli Steels Ltd. has commissioned a 0.2 mmt IF in Dhabeji and Agha Steel Industries is installing a 0.08 mmt IF in Karachi, which are expected to become operational in 2018.

There are no capacity investments underway in Japan or Korea, but several closures have recently taken place as part of within-firm resource reallocation plans. For example, Japan's Kyoei Steel and Osaka Steel shut down two EAFs (with a capacity of 0.48 mmt each) in 2016, to reduce production costs and increase efficiency by reallocating all crude steelmaking production to other more efficient plants (Kyoei Steel, 2015^[8]) (Osaka Steel, 2015^[9]). In addition, Kobe Steel has shut down upstream equipment, also resulting in the permanent closure of a BOF with 1.38 mmt of capacity at Kobe Works at the end of October 2017 (Kobe Steel, 2017^[10]). The upstream processes were moved to Kakogawa Works to compensate for the reduction at Kobe Works, but without any corresponding increase in crude steelmaking capacity this is likely to result in higher steelmaking capacity utilisation rates and potentially scale-driven efficiency gains at the Kakogawa Works (Kobe Steel, 2013^[11]) (Platts, 2017^[12]).⁷

3.3. CIS

In the Commonwealth of Independent States (CIS) region, several projects to build EAF and BOF facilities are currently underway. However, most of the capacity developments in this region relate to the modernisation of steel manufacturing facilities, while outdated open hearth furnaces (OHF) are shut down. For example, Russian steelmaker OMK is planning to withdraw an OHF in 2018, while Ukraine's Metinvest has plans to replace its OHF with a capacity of 4.7 mmt with new BOF capacity of 3.2 mmt in 2020. Amongst other projects, Russian steelmaker Tulachermet is installing a 1.8 mmt per year BOF in the Central Federal District, which is expected to be operational in 2018. The steelmaker NLMK has also announced a BOF capacity expansion at its Lipetsk site, of 1.5 mmt by 2020.

In addition, several Russian steel manufacturers are installing EAFs. Torex and Kirov Metallurgical Zavod are constructing new EAF furnaces with a capacity of 0.24 mmt and 0.37 mmt, respectively, which are expected to be operational in 2018. Don-Metal's new EAF with a capacity of 0.16 mmt is also underway with commissioning expected in 2019.

A total of 2.7 mmt of gross capacity additions are either underway or planned for completion in the 2018-20 period in the CIS region. Taking only underway projects into account, steelmaking capacity in the CIS region is expected to increase from 145.7 mmt to 147.8 mmt between 2018 and 2020 (+1.4%).

3.4. Africa

In Africa, there are investment projects planned or already underway, aimed at increasing domestically-produced steel for use in developing the region's infrastructure. Overall, a total of 8.5 mmt of gross capacity additions are either underway or planned for completion in the 2018-20 period in Africa, with new investments foreseen mainly in North African economies, and the region's steelmaking capacity is expected to grow from a level of 35 mmt in 2017.

For example, in Algeria Tosyaly is investing in a new EAF plant with the capacity to produce 2.3 mmt, with a view to starting operations by 2018. Algeria's Qatari Solb Company has started to construct a new steel plant with a capacity of 2.1 mmt, with operations expected to begin in 2018. In Egypt, the Egyptian Steel Group started operation of an EAF mill with a capacity to produce 0.83 mmt of steel in Ain Al Sokhna in 2017, while Ezz Steel's new EAF mill with a capacity of 0.85 mmt is expected to become operational in 2019.

3.5. Latin America

In Latin America, most of the capacity expansion projects in the recent past have occurred in Brazil, such as the 3 mmt expansion by Companhia Siderúrgica do Pecém (CSP) in 2016 and Grupo Ferroeste's 0.6 mmt expansion in 2015. However, some capacity expansion plans have been postponed recently due to weak conditions in the steel market. For instance, Arcelor Mittal Brazil's plan to install an EAF with 0.2 mmt of capacity at the Monlevade steel works, which initially was scheduled for commissioning in 2017, has been put on hold. In addition, Siderúrgica Latino Americana (Silat) has postponed its construction of a 1.2 mmt plant in Primavera, Ceará.

However, some EAF projects are underway, or have recently come on stream, in other parts of the region. For example, Gerdau S.A started operations at a 0.65 mmt EAF plant in Perez, Argentina in 2017 and Siderurgica Nacional is installing an EAF plant with 1.55 mmt of capacity in Ciudad Piar, Bolivar, Venezuela, which is expected to become operational in 2018. Overall, the level of steelmaking capacity in Latin America could increase by 2.0% to 77.5 mmt by 2020 if all the underway projects come on stream.

3.6. NAFTA

Crude steelmaking capacity in the NAFTA region was around 159 mmt in 2017. Changes during 2018-20 are expected to be relatively small. An addition of 0.6 mmt of EAF steelmaking capacity is expected to be deployed in Mexico's Tlaxcala region in 2018, as a result of an investment project by Industrias CH, Grupo Simec (DANIELI, 2018^[13]) (Metal Expert, 2018^[14]). In the United States, Commercial Metals Company (CMC) in Oklahoma, started operation of new EAF with capacities of 0.35 mmt in 2017 (CMC, 2018^[15]).

A number of closures have taken place in recent years. For example, Warren Steel Holdings shut down an EAF plant in Ohio in 2016 (Platts, 2016^[16]). In the absence of additional closures, steelmaking capacity in the region could increase by 0.6 mmt to reach nearly 160 mmt by 2020.

3.7. Europe

Steelmaking capacity in Europe decreased from 278.3 mmt to 276.9 mmt in 2017 (-0.5%) and could remain stable between 2018 and 2020, according to the publicly available sources used to update the OECD's monitoring databases.

There are no capacity investments underway in the European Union. Closures have, however, occurred, mainly in downstream and upstream facilities. In Italy, Aferpi started closing its BOF in Piombino in 2017, which had a capacity of 2.9 mmt (Aferpi, 2017^[17]). On the other hand, as part of their business plan for revival of Piombino plant,

Aferpi announced that it was ordering two new EAFs with a capacity of about 1.0 mmt each, during the 2018-2019 period (Aferpi, 2016_[18])⁸.

In the region “Other Europe” (i.e. Norway, Switzerland and Turkey), there are no steelmaking capacity investment projects underway, except for Turkish Habas’s project which started operation of an EAF with 1.5 mmt in Izmir in 2017. A previously foreseen EAF project that was underway, amounting to 0.5 mmt per year, in Turkey (Corbus Celik’s plant in Hatay province), has been suspended since 2015.

Annex A. AVAILABLE EVIDENCE OF PLANT LEVEL INVESTMENTS

Table A2 summarises the plant level database providing the developments in underway or planned steelmaking capacity investment projects up to 2020, according to publicly available information.

Table A1. Investment data

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Africa	Algeria	El Hadjar, Annaba	IMETAL	BOF	x 1	350	underway	2018	World Steel Capacities
Africa	Algeria	Bethioua	Tosyali	EAF	x 1	2 300	underway	2018	World Steel Capacities
Africa	Algeria	Bellara, Jijel	Algerian Qatari Solb Company	EAF	x 2	2 100	underway	2018	World Steel Capacities
Africa	Algeria	El Hadjar, Annaba	Gulf National Steel	EAF	x 1	600	postponement	2018	World Steel Capacities
Africa	Algeria	El Hadjar, Annaba	IMETAL	EAF	x 1	600	plan	2018	World Steel Capacities
Africa	Algeria	Bellara, Jijel	Algerian Qatari Solb Company	EAF	x 1	2 000	plan	2019	Metal Expert
Africa	Algeria	Annaba	Emarat Dzayer Steel Company	EAF	x 1	n/a	plan	n/a	World Steel Capacities
Africa	Algeria	n/a	Lamino Grouop Attia	EAF	x 1	600	plan	n/a	World Steel Capacities
Africa	Egypt	Al Ain Al Sokhna	Egyptian Steel Group	EAF	x 1	830	operating	2017	Metal Expert
Africa	Egypt	Sokhna, Suez	Ezz Steel	EAF	x 1	850	underway	2019	Metal Expert
Africa	Kenya	Mwavumbo	Top Steel Kenya	Steelmkg	n/a	157	plan	n/a	Platts
Africa	Kenya	Sinosteel	Sinosteel	Steelmkg	n/a	1 000	plan	n/a	Metal Expert
Africa	Mozambique	Revuboe Industrial Zone	Capitol Iron & Steel Ltd	Steelmkg	n/a	500	plan	n/a	Metal Expert
Africa	Nigeria	Lagos	Standard Metallurgical Company	EAF	x 1	260	underway	2018	World Steel Capacities
Africa	South Africa	Hebei Iron & Steel (Hegang)	Hebei Iron & Steel (Hegang)	Steelmkg	n/a	5 000	postponement	2020	Metal Expert / Platts
Africa	Tanzania	Liganga	Tanzania China International Mineral Resources Ltd	Steelmkg	n/a	1 000	plan	n/a	Metal Expert
Asia	Bangladesh	Masjiddah, Kumira, Sitakunda, Chittagong	GPH Ispat Ltd	EAF	x 1	815	underway	2018	World Steel Capacities
Asia	Bangladesh	Ghoramora, Bara Kumira, Sitakunda, Chittagong	Kabir Group of Industries	EAF	n/a	500	underway	2018	World Steel Capacities
Asia	China	Rizhao, Shandong	Shandong Iron & Steel Rizhao	BOF	x 4	8 500	operating	2017	Metal Expert, Wood Machenzie
Asia	China	Caofeidian port, Hebei	Shougang Jingtang	BOF	x 4	5 000	underway	2018	Platts
Asia	China	Fangchenggang, Guangxi	Liuzhou Iron & Steel	BOF	x 7	14 700	plan	n/a	Platts
Asia	China	Hebei, Laoting	Hebei Iron & Steel (Hegang)	Steelmkg	n/a	7 100	plan	n/a	Platts
Asia	China	Ningde, Fujian	Angang Iron & Steel Group	Steelmkg	n/a	10 000	plan	n/a	Platts
Asia	China	Tangshan	Tangshan Bohai Iron & Steel	Steelmkg	n/a	8 000	plan	n/a	Platts
Asia	China	n/a	HBIS Tangyin (河北钢铁集团唐银钢铁有限公司)	BOF	n/a	500	operating	2016	Wood Machenzie
Asia	China	n/a	Jixin (内蒙古吉鑫钢铁)	BOF	n/a	2 100	operating	2016	Wood Machenzie
Asia	China	n/a	Qinguan (清泉钢铁有限公司)	BOF	n/a	500	operating	2016	Wood Machenzie
Asia	China	n/a	Sanming Fuxin (福建三明钢铁集团福建福鑫钢铁有限公司)	BOF	n/a	500	operating	2016	Wood Machenzie
Asia	China	n/a	Suzhou (江苏钢铁集团有限公司)	BOF	n/a	500	operating	2016	Wood Machenzie
Asia	China	n/a	Xinxing Kingtec (新兴铸管有限公司金特)	BOF	n/a	1 000	operating	2016	Wood Machenzie
Asia	China	n/a	NHIC (内蒙古北方重工)	EAF	n/a	2 800	operating	2016	Wood Machenzie
Asia	China	Zhanjiang, Guangdong	Guangdong Steel Group Corp	BOF	x 1	2 976	operating	2016	Platts
Asia	India	Angul, Odisha	Jindal Steel and Power Limited (JSPL)	BOF	x 1	3 000	operating	2017	Platts
Asia	India	Dilimili, Chhattisgarh	NMDC	BOF	x 2	3 000	underway	2018	World Steel Capacities
Asia	India	Bhilai, Chhattisgarh	Steel Authority of India Ltd (SAIL)	BOF	x 3	3 000	underway	2018	World Steel Capacities
Asia	India	Sindhudurg, Maharashtra	Shree Uttam Steel and Power Ltd	BOF	x 1	1 550	underway	2019	World Steel Capacities

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Asia	India	Chhattisgarh (Bastar Greenfield Project)	Tata Steel	Steelmkg	n/a	5 000	postponement	n/a	Metal Expert
Asia	India	Paradip, Odisha	Essar Steel	BOF	x 1	6 000	plan	2018	World Steel Capacities
Asia	India	Kalinganagar, Odisha	Mideast Integrated Steel (Mesco Steel)	BOF	n/a	1 200	plan	2019	World Steel Capacities
Asia	India	Kalinganagar, Odisha	Mideast Integrated Steel (Mesco Steel)	BOF	n/a	2 300	plan	2019	World Steel Capacities
Asia	India	Anjar, Gujarat	Welspun Group	BOF	x 2	3 000	plan	2020	World Steel Capacities
Asia	India	Dolvi, Maharashtra	JSW Ispat Steel Ltd.	BOF	x 2	5 000	plan	2020	Platts, World Steel Capacities
Asia	India	Patratu, Jharkhand	Jindal Steel and Power Limited (JSPL)	BOF	x 1	3 200	plan	n/a	World Steel Capacities
Asia	India	Ballari	Sesa Sterlite	n/a	n/a	4 000	plan	n/a	Metal Expert
Asia	India	Dilmili, Chhattisgarh	NMDC & SAIL JV	Steelmkg	n/a	6 000	plan	n/a	Platts
Asia	India	Jajpur, Odisha	Neelachal Ispat Nigam (NINL)	BOF	x 1	1 000	plan	n/a	World Steel Capacities
Asia	India	Panjim	Shree Uttam Steel and Power Ltd	BOF	x 1	1 550	plan	n/a	World Steel Capacities
Asia	India	Wardha, Maharashtra	Uttam Galva Steels Ltd	Steelmkg	n/a	1 000	plan	n/a	Metal Expert
Asia	India	Jamshedpur, Jharkhand	Tata Steel	EAF	n/a	1 500	plan	n/a	Platts
Asia	India	Jharkhand	Tata Steel	Steelmkg	n/a	12 000	plan	n/a	Metal Expert
Asia	India	Kalinganagar, Odisha	Mideast Integrated Steel (Mesco Steel)	EAF	n/a	400	plan	n/a	Metal Expert
Asia	India	Kalinganagar, Odisha	Tata Steel	BOF	n/a	5 000	plan	n/a	World Steel Capacities, Platts
Asia	India	Keonjhar, Odisha	NMDC & OMC JV	Steelmkg	n/a	12 000	plan	n/a	Metal Expert
Asia	India	Marakuta	MSP Metallics Ltd	IF	x 4	240	plan	n/a	World Steel Capacities
Asia	India	Odisha	POSCO India Limited	Steelmkg	n/a	12 000	plan	n/a	Platts
Asia	India	Salboni, West Bengal	JSW Steel	BOF	x 2	3 000	plan	n/a	Platts, Metal Expert
Asia	India	Salboni, West Bengal	JSW Steel	Steelmkg	n/a	7 000	plan	n/a	Platts, Metal Expert
Asia	India	Jharkhand	JSW Steel	Steelmkg	n/a	10 000	plan	n/a	Metal Expert
Asia	India	Odisha	JSW Steel	Steelmkg	n/a	10 000	plan	n/a	Metal Expert
Asia	India	Vijayanagar, Karnataka	JSW Steel	BOF	x 1	2 000	operating	2016	Metal Expert
Asia	India	Visakhapatnam, Andhra-Pradesh	Rashtriya Ispat Nigam Ltd (RINL)	BOF	x 1	1 000	operating	2016	Metal Expert
Asia	India	Jharkhand	ArcelorMittal	Steelmkg	n/a	3 000	cancelled	n/a	Metal Expert
Asia	India	Karnataka	ArcelorMittal	Steelmkg	n/a	6 000	cancelled	n/a	Metal Expert
Asia	Indonesia	North Sumatra	Gunung Gahapi Sakti (GGS)	EAF	x 1	500	underway	2018	Metal Expert
Asia	Indonesia	North Sumatra	Gunung Gahapi Sakti (GGS)	EAF	x 1	500	plan	n/a	Metal Expert
Asia	Indonesia	Central Sulawesi	Anshan Iron & Steel Group Corporation	Steelmkg	n/a	5 000	plan	n/a	Platts
Asia	Indonesia	China Minsheng Investment Co	China Minsheng Investment Co	Steelmkg	n/a	3 000	plan	n/a	Metal Expert
Asia	Indonesia	Cilegon, West Java	Krakatau POSCO	Steelmkg	n/a	3 000	plan	n/a	Metal Expert
Asia	Indonesia	East Java	Wuhan Iron & Steel (Wugang)	EAF	x 1	5 000	plan	n/a	Platts
Asia	Malaysia	Kuantan Industrial Park	Alliance Steel	BOF	x 2	3 500	underway	2018	Platts, World Steel Capacities
Asia	Malaysia	Kemaman, Terengganu	Eastern Steel Sdn Bhd	Steelmkg	n/a	2 000	plan	n/a	Metal Expert
Asia	Malaysia	Sarawak State	Hebei Xinwuan Steel Group	BOF	x 1	5 000	plan	n/a	Metal Expert
Asia	Malaysia	Selangor Darul Ehsan	The Lion Group	BOF	x 1	1 600	plan	n/a	World Steel Capacities
Asia	Mongolia	Sainshand	DRI plant and steelworks project	Steelmkg	n/a	3 500	plan	n/a	Platts
Asia	Pakistan	Karachi	Faizan Steel Mills	IF	x 2	80	underway	2018	World Steel Capacities
Asia	Pakistan	Dhabeji	Amreli Steels / Dhabeji plant	IF	x 1	200	plan	2018	World Steel Capacities
Asia	Pakistan	Port Qasim, Karachi	Agha Steel Industries	EAF	x 1	300	plan	2018	World Steel Capacities
Asia	Pakistan	Faisalabad	Faisalabad Works	IF	x 2	600	plan	2019	World Steel Capacities
Asia	Pakistan	n/a	Taybah Steel Group	EAF	x 1	500	plan	2020	World Steel Capacities
Asia	Pakistan	n/a	Taybah Steel Group	EAF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	n/a	Indus Consortium Mining & Steel Industry	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	n/a	Indus Consortium Mining & Steel Industry	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Pakistan	Dhabeji	Amreli Steels / Dhabeji plant	IF	x 1	200	operating	2017	World Steel Capacities

16 | RECENT DEVELOPMENTS IN STEELMAKING CAPACITY

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Asia	Philippines	Bulacan	SteelAsia Manufacturing Corporation	EAF	n/a	800	underway	2018	World Steel Capacities
Asia	Philippines	Bulacan	SteelAsia Manufacturing Corporation	EAF	n/a	600	plan	2018	World Steel Capacities
Asia	Philippines	Davao	SteelAsia Manufacturing Corporation	EAF	n/a	n/a	plan	n/a	World Steel Capacities
Asia	Viet Nam	Haiphong	Australia Steel Billet Co	EAF	n/a	750	postponement	n/a	Metal Expert
Asia	Viet Nam	Ninh Binh	Kyoei Steel Vietnam Company	EAF	x 1	300	postponement	n/a	Platts
Asia	Viet Nam	Hai Phong	Vietnam-Japan Steel (Vija)	EAF	x 1	350	plan	n/a	World Steel Capacities
Asia	Viet Nam	Dung Quat Industrial Park, Quang Ngai	Hoa Phat Group	BOF	x 2	2 000	plan	2018	Metal Expert
Asia	Viet Nam	Dung Quat Industrial Park, Quang Ngai	Hoa Phat Group	BOF	x 2	2 000	plan	2019	World Steel Capacities
Asia	Viet Nam	Lao Cai	Vietnam Steel Corporation (VSC)	BOF	x 1	500	plan	n/a	Metal Expert
Asia	Viet Nam	Thai Nguyen	Thai Nguyen Iron & Steel Corporation (TISCO)	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Viet Nam	Tang Loong Industrial Zone in Bao Thang district, Lao Cai province	Viet - Trung Metallurgy Company	BOF	x 1	500	plan	n/a	World Steel Capacities
Asia	Viet Nam	Phu My, Ba Ria Vung Tau	Hoa Sen Group	EAF	n/a	800	plan	n/a	World Steel Capacities
Asia	Viet Nam	Phu My, Ba Ria Vung Tau	Hoa Sen Group	EAF	n/a	500	plan	n/a	World Steel Capacities
Asia	Viet Nam	Vung Ang, Ha Tinh	Formosa Ha Tinh Steel Corp	BOF	x 3	7 000	operating	2017	World Steel Capacities, Company HP
Asia	Viet Nam	Vung Ang, Ha Tinh	Formosa Ha Tinh Steel Corp	BOF	n/a	3 000	plan	n/a	World Steel Capacities
CIS	Azerbaijan	The Azerbaijani Government	The Azerbaijani Government	Steelmkg	n/a	n/a	plan	n/a	Platts
CIS	Georgia	Rustavi	Georgian Steel	EAF	x 1	180	postponement	n/a	Platts
CIS	Georgia	Rustavi	Georgian Steel	EAF	x 1	180	plan	n/a	Platts
CIS	Kazakhstan	Aktau	Caspian Stal	EAF	x 1	80	plan	n/a	World Steel Capacities
CIS	Kazakhstan	Aktau	Aksuskiy Electrical Steel Works	EAF	x 1	600	plan	n/a	World Steel Capacities
CIS	Kazakhstan	Aktobe	SBS Group	EAF	x 1	300	plan	n/a	World Steel Capacities
CIS	Kazakhstan	Shymkent	Ferrum-Vtor	EAF	n/a	350	plan	n/a	World Steel Capacities
CIS	Kyrgyzstan	Chuyskya region	Kyrgyz Metall	EAF	x 1	120	plan	2018	World Steel Capacities
CIS	Russian Federation	Khabarovsk	Torex / Khabarovsk Steel Mill	EAF	x 1	240	underway	2018	World Steel Capacities
CIS	Russian Federation	Kirov	Kirov Metallurgical Zavod	EAF	x 1	372	underway	2018	World Steel Capacities
CIS	Russian Federation	Tula, Central Federal District	Tulachemet	BOF	x 1	1 800	underway	2018	Metal Expert
CIS	Russian Federation	Rostov, Southern Federal District	Don-Metall	EAF	x 1	160	underway	2019	Metal Expert
CIS	Russian Federation	Lipetsk site	NLMK	BOF	x 2	1 500	underway	2020	Company HP, Platts
CIS	Russian Federation	Nizhny Tagil	Evraz NTMK	BOF	x 1	2 000	postponement	2017	World Steel Capacities
CIS	Russian Federation	Nizhny Tagil	Evraz NTMK	BOF	x 1	1 500	postponement	2017	World Steel Capacities
CIS	Russian Federation	Murmansk	Monchegorsk Mechanical Engineering Plant	EAF	n/a	135	postponement	2017	Metal Expert
CIS	Russian Federation	Kolpino, Northwestern Federal District	Mera-Stal	EAF	x 1	350	postponement	2017	Metal Expert
CIS	Russian Federation	Kineshma	Kineshma Electrometallurgical Works	IF	x 1	240	postponement	2017	World Steel Capacities
CIS	Russian Federation	Bratsk, Siberian Federal District	East Siberian Metallurgical Co	EAF	x 1	270	postponement	2018	Metal Expert
CIS	Russian Federation	Chusovoy, Volga Federal District	United Metallurgical (OMK)	EAF	x 1	800	postponement	2018	Ministry of Industry and Trade of the Russian Federation
CIS	Russian Federation	Leningradskaya region	Metal and Innovations	EAF	x 1	350	postponement	2019	World Steel Capacities
CIS	Russian Federation	Rostov, Southern Federal District	DonElectroStal	EAF	x 1	285	postponement	2022	World Steel Capacities
CIS	Russian Federation	Volgotsem mash	Volgotsem mash	EAF	n/a	500	postponement	n/a	Metal Expert
CIS	Russian Federation	Mtsensk, Orel	StalKron	Steelmkg	n/a	500	postponement	n/a	Metal Expert
CIS	Russian Federation	Krasnoyarsk	Krasny Yar AO	EAF	n/a	200	postponement	n/a	Metal Expert
CIS	Russian Federation	Volgotsem mash	Volgotsem mash	EAF	n/a	500	postponement	n/a	Metal Expert
CIS	Russian Federation	Magnitogorsk	Magnitogorsk Iron & Steel Works	BOF	x 1	3 200	plan	n/a	World Steel Capacities
CIS	Russian Federation	Beloretsk	Belstal	BOF	x 1	500	plan	2018	World Steel Capacities
CIS	Russian Federation		Khabarovsk	BOF	x 1	n/a	plan	n/a	World Steel Capacities
CIS	Russian Federation	Chelyabinsk	Zlatoust Steel Plant	EAF	x 1	700	plan	n/a	Ministry of Industry and Trade of the Russian Federation
CIS	Russian Federation	Novotroitsk	Metalloinvest	BOF	x 1	3 000	plan	n/a	World Steel Capacities
CIS	Russian Federation	Irkutsk, Siberian Federal District	Basic Element and En+ Group	Steelmkg	n/a	260	plan	n/a	Ministry of Industry and Trade of the Russian Federation

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
CIS	Russian Federation	Tula, Central Federal District	Tulachemet	BOF	x 1	1 870	plan	n/a	Metal Expert
CIS	Russian Federation	Leninogorsk	TatStal	EAF	x 1	1 200	cancelled	2017	World Steel Capacities
CIS	Russian Federation	Tatarstan	Maxi-Invest investment company	EAF	x 1	1 200	cancelled	n/a	Metal Expert
CIS	Ukraine	Zaporizhzhya	Metinvest	BOF	x 2	3 200	underway	2020	World Steel Capacities
CIS	Ukraine	Mariupol	Ilyich Iron and Steel Works	BOF	x 2	5 000	postponement	2017	World Steel Capacities
CIS	Ukraine	Donetsk	Donetsk Iron & Steel Works (DMZ)	EAF	x 1	1 500	postponement	n/a	Platts
Europe	Germany	Badische Stahlwerke GmbH	Badische Stahlwerke GmbH	EAF	x 2	400	plan	n/a	World Steel Capacities
Europe	Italy	n/a	Aferpi	EAF	x 1	1 000	plan	2018	World Steel Capacities
Europe	Italy	n/a	Aferpi	EAF	x 1	1 000	plan	2019	World Steel Capacities
Latin America	Argentina	Perez	Gerdau S.A.	EAF	x 1	650	operating	2017	World Steel Capacities
Latin America	Bolivia	El Mutún, Santa Cruz	Empresa Siderurgica del Mutun	EAF	x 1	150	plan	2019	World Steel Capacities
Latin America	Bolivia	Buena Vista, Santa Cruz province	Las Lomas	EAF	n/a	200	plan	2019	Platts
Latin America	Brazil	Monlevade	ArcelorMittal Brazil	BOF	x 1	1 200	postponement	2017	Metal Expert
Latin America	Brazil	Primavera, Ceará	Siderúrgica Latino Americana (Silat)	EAF	x 1	1 200	postponement	n/a	Metal Expert
Latin America	Brazil	Juiz de Fora	ArcelorMittal Aços Longos	EAF	x 1	200	plan	n/a	World Steel Capacities
Latin America	Brazil	Ceara	Companhia Siderúrgica do Pecém (CSP)	Steelmkg	n/a	3 000	plan	n/a	Metal Expert
Latin America	Brazil	Espírito Santo	Companhia Siderúrgica Ubu (CSU)	Steelmkg	n/a	5 000	plan	n/a	Metal Expert
Latin America	Brazil	Pará	Aços Laminados do Pará (ALPA)	Steelmkg	n/a	2 500	plan	n/a	Metal Expert
Latin America	Ecuador	Jv with Sinosteel	State-owned flat steel mill	n/a	n/a	n/a	plan	n/a	Platts
Latin America	Ecuador	Porsorja	EP Petroecuador	EAF	x 1	1 000	plan	n/a	World Steel Capacities
Latin America	Peru	Pisco	Aceros Arequipa	EAF	x 1	650	plan	2018	Platts
Latin America	Peru	Pisco	Aceros Arequipa	EAF	x 1	400	plan	2019	World Steel Capacities
Latin America	Venezuela	Ciudad Piar, Bolivar	Siderurgica Nacional	EAF	x 1	1 550	underway	2018	World Steel Capacities
Latin America	Venezuela	Ciudad Ojeda, Zulia	Gerdau Sizuca	EAF	x 1	60	plan	n/a	Metal Expert
Middle East	Afghanistan	Hajigak	Afghan Iron & Steel Consortium (Afisco)	Steelmkg	n/a	1 200	plan	n/a	Platts
Middle East	Iran	Bandar Abbas	Kish South Kaveh Steel	EAF	x 1	1 200	underway	2018	World Steel Capacities
Middle East	Iran	C. KHORASAN, Torbat Heydariyeh	National Iranian Steel Company	EAF	x 1	800	underway	2018	World Steel Capacities
Middle East	Iran	Esfahan	Natanz Steel Industries	EAF	x 1	850	underway	2018	World Steel Capacities
Middle East	Iran	Shiraz	Fasa Steel Complex Co (Fasco)	EAF	x 1	1 500	underway	2018	World Steel Capacities
Middle East	Iran	Kermanshah	Bistoun Steel	IF	x 1	400	underway	2018	World Steel Capacities
Middle East	Iran	Sadrfulad	Sadrfulad Complex	EAF	x 1	400	underway	2018	World Steel Capacities
Middle East	Iran	Saeb Steel Complex	Saeb Steel Complex	EAF	x 1	550	underway	2018	World Steel Capacities
Middle East	Iran	Bardsir	MIDHCO / Bardsir Sponge Iron and Steel Plant - Bardsir Steel Making Plant	EAF	x 1	1 000	underway	2018	World Steel Capacities
Middle East	Iran	Zarand Iron & Steel Company (ZISCO)	Zarand Iron & Steel Company (ZISCO)	BOF	x 1	1 700	underway	2018	World Steel Capacities
Middle East	Iran	Urmia 2nd Industrial Zone, Western Azerbaijan	Orumieh Steel Group	EAF	n/a	1 200	underway	2018	World Steel Capacities
Middle East	Iran	Chamahal-va-Bakhtiyari	Mobarakeh Steel / Sefid Dasht Steel Complex (Chahamahal Bakhtiyari)	EAF	x 1	1 000	underway	2018	World Steel Capacities
Middle East	Iran	Fars	Eghlid Steel	EAF	x 1	1 500	underway	2018	irsteel.com
Middle East	Iran	Khorasan	IMIDRO (Sabzevar Steel)	EAF	x 1	800	underway	2018	Platts, World Steel Capacities
Middle East	Iran	Shadegan, Khuzestan	Khuzestan / Shadegan Steel Complex	EAF	x 1	1 000	underway	2018	World Steel Capacities
Middle East	Iran	Khuzestan	Anvand Jahanara Steel Company	EAF	x 1	1 200	underway	2018	World Steel Capacities
Middle East	Iran	Yazd	Iran Alloy Steel Company	EAF	x 1	700	underway	2018	World Steel Capacities

18 | RECENT DEVELOPMENTS IN STEELMAKING CAPACITY

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iran	Eshtehard, Alborz	Aria Zob Steel Complex	EAF	x 1	500	underway	2018	World Steel Capacities
Middle East	Iran	Sirjan, Kerman	Golgozar Mining & Industrial Co. / Jahan Foolad Sirjan Steel Complex	EAF	x 1	1 300	underway	2018	World Steel Capacities
Middle East	Iran	Chatroud, Kerman Province	Butia Steel Company	EAF	x 1	1 500	underway	2019	Metal Expert
Middle East	Iran	Abarkooh, Yazd	Abar Kough Steel & Rolling	EAF	x 1	600	underway	2019	World Steel Capacities
Middle East	Iran	Abarkuh, Yazd, Sarmad Abarkuh	Sarmad Iron and Steel Company	EAF	n/a	600	underway	2020	World Steel Capacities
Middle East	Iran	Hormozgan, Hormozgan	Mobarakeh Steel	EAF	x 1	1 500	underway	2020	World Steel Capacities
Middle East	Iran	Bonab	Bonab Steel Complex	EAF	x 1	1 500	cancelled	n/a	World Steel Capacities
Middle East	Iran	Sadr	Shahrood Steel Co	EAF	x 1	400	underway	n/a	World Steel Capacities
Middle East	Iran	n/a	Azna Steel	EAF	x 1	700	underway	n/a	World Steel Capacities
Middle East	Iran	Sirjan Iranian Steel Company (SISCO)	MIDHCO / Sirjan Iranian Steel Company (SISCO)	EAF	n/a	1 000	underway	n/a	Company HP
Middle East	Iran	Sadr	Shahrood Steel Co	EAF	x 1	300	underway	n/a	World Steel Capacities
Middle East	Iran	Chabahar city, Sistan and Baluchestan	Pars Kohan Diar Parsian Steel (PKP)	EAF	x 1	1 600	plan	2018	World Steel Capacities
Middle East	Iran	Malekan, Eastern Azerbaijan	Malekan Steel	EAF	x 1	400	plan	2018	World Steel Capacities
Middle East	Iran	Azerbaijan	Eight mini steelworks (Mianeh Steel)	EAF	x 1	800	plan	2018	Platts
Middle East	Iran	n/a	Bafgh Mineral Complex Iron and Steel Industry Company (B-MISCO)	EAF	x 1	800	plan	2018	World Steel Capacities
Middle East	Iran	Sefid dasht Industrial Park, Chaharmahal and Bakhtiari	Saba Foulad Zagros	EAF	x 1	460	plan	2018	World Steel Capacities
Middle East	Iran	Golgozar	Golgozar Mining & Industrial Co.	EAF	x 1	1 500	plan	2018	World Steel Capacities
Middle East	Iran	Dezful, Khorasan province	Dezful Steel	IF	x 1	450	plan	2018	World Steel Capacities
Middle East	Iran	Ahwaz	Khuzestan Steel Company (KSC)	EAF	x 6	1 400	plan	2019	Metal Expert
Middle East	Iran	Qeshm Free Zone	Qeshm Steel Development Co.(QE.S.D.Co)	EAF	x 1	1 500	plan	2021	World Steel Capacities
Middle East	Iran	Qeshm Free Zone	Qeshm Steel Development Co.(QE.S.D.Co)	EAF	x 1	1 500	plan	2023	World Steel Capacities
Middle East	Iran	Khuzestan	Eight mini steelworks (Shadegan Steel)	EAF	x 1	1 000	plan	n/a	Metal Expert
Middle East	Iran	Macran Steel Complex	IMIDRO	EAF	x 1	3 200	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1 500	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1 500	plan	n/a	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	EAF	x 1	1 500	plan	n/a	World Steel Capacities
Middle East	Iran	Bakhtiari	Mobarakeh Steel	EAF	x 1	1 000	plan	n/a	World Steel Capacities
Middle East	Iran	Torbat Heydariyeh	Torbat Heydariyeh Steel	EAF	x 1	1 450	plan	n/a	World Steel Capacities
Middle East	Iran	Torbat Heydariyeh	Torbat Heydariyeh Steel	EAF	x 1	1 450	plan	n/a	World Steel Capacities
Middle East	Iran	Chaharmahal Bakhtiari	Eight mini steelworks (Sefid Dasht Steel)	EAF	x 1	800	plan	n/a	Metal Expert
Middle East	Iran	Esfahan	Esfahan Steel	BOF	x 2	2 280	plan	n/a	World Steel Capacities
Middle East	Iran	Esfahan	Esfahan Steel	EAF	x 1	1 650	plan	n/a	World Steel Capacities
Middle East	Iran	Fars	Eight mini steelworks (Neyriz Steel)	EAF	x 1	800	plan	n/a	Metal Bulletin
Middle East	Iran	Kerman	Eight mini steelworks (Baft Steel)	EAF	x 1	800	plan	n/a	Platts
Middle East	Iran	Shadegan Steel Complex	Khuzestan	EAF	x 1	1 300	plan	n/a	World Steel Capacities
Middle East	Iran	Khorramshahr Steel	Khuzestan	EAF	x 1	1 250	plan	n/a	World Steel Capacities
Middle East	Iran	Khorramshahr Steel	Khuzestan	EAF	x 1	1 250	plan	n/a	World Steel Capacities
Middle East	Iran	Khorramshahr Steel	Khuzestan	EAF	x 1	1 250	plan	n/a	World Steel Capacities
Middle East	Iran	Khorramshahr Steel	Khuzestan	EAF	x 1	1 250	plan	n/a	World Steel Capacities
Middle East	Iran	Khuzestan	Anvand Jahanara Steel Company	EAF	x 1	1 200	plan	n/a	World Steel Capacities
Middle East	Iran	n/a	North West Steel Industries (NWSI)	EAF	x 1	800	plan	n/a	World Steel Capacities
Middle East	Iran	Samangan Steel Industries	Samangan Steel Industries	EAF	x 1	750	plan	n/a	Metal Expert
Middle East	Iran	Samangan Steel Industries	Samangan Steel Industries	EAF	x 1	750	plan	n/a	Metal Expert
Middle East	Iran	Golgozar	Golgozar Mining & Industrial Co.	EAF	x 1	1 500	plan	n/a	World Steel Capacities
Middle East	Iran	Golgozar	Golgozar Mining & Industrial Co.	EAF	x 1	1 000	plan	n/a	World Steel Capacities
Middle East	Iran	Sistan and Baluchestan	IMIDRO	EAF	x 1	3 200	plan	n/a	Metal Expert
Middle East	Iran	n/a	Foolad Kavir	EAF	x 1	500	plan	n/a	World Steel Capacities
Middle East	Iran	Tehran	West Alborz Steel Co.	EAF	x 1	1 000	plan	n/a	World Steel Capacities

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iran	Yazd	Chadormalu Mining & Industrial Co / Samen Steel	EMF	x 1	1 300	operating	2017	World Steel Capacities
Middle East	Iran	Khorasan	Khorasan Steel Complex	EMF	x 1	650	operating	2017	World Steel Capacities
Middle East	Iran	Shahrekord	Mobarakeh Steel / Saba Steel Complex	EMF	x 1	850	operating	2017	World Steel Capacities
Middle East	Iraq	Erbil	WorldBridge Steel	EMF	x 1	500	postponement	2017	Metal Expert
Middle East	Iran	Zonouz (Shams Iron & Steel Complex)	Daric Investment Group	EMF	x 1	1 500	plan	n/a	World Steel Capacities
Middle East	Iran	South Khorasan	IMIDRO / Ghaenat Steel Complex	EMF	x 1	800	plan	n/a	World Steel Capacities
Middle East	Iraq	Basra	Al Moussawi Trading	EMF	n/a	500	plan	n/a	Platts
Middle East	Iraq	Sulaymaniyah, Kurdistan	Mass Group Holding	EMF	x 1	250	plan	n/a	Metal Expert
Middle East	Iraq	Taji	Al-Sumood Company for Steel Industries	EMF	x 2	150	plan	n/a	Platts
Middle East	Jordan	Zarqa	National Steel Industry	IF	x 1	100	postponement	2018	Metal Expert
Middle East	Oman	Sohar	Moon Iron & Steel (MISCO)	EMF	x 1	1 200	underway	2018	Metal Expert
Middle East	Oman	Sur	Sun Metals	EMF	x 2	2 400	postponement	2018	Metal Expert
Middle East	Oman	Muscat Steel	Muscat Steel	EMF	x 1	200	plan	n/a	Metal Expert
Middle East	Saudi Arabia	Jeddah	Arkan Steel	EMF	x 1	600	plan	n/a	World Steel Capacities
Middle East	Saudi Arabia	Rabigh	Al-Raki for Trading & Industry	EMF	x 1	400	postponement	2017	World Steel Capacities
Middle East	Saudi Arabia	Yanbu, Medina	Atoun Steel Industry	EMF	x 1	910	postponement	2017	Metal Expert
Middle East	Saudi Arabia	Jizan	Al-Yamahah Steel Industries	EMF	x 1	1 000	postponement	n/a	Platts
Middle East	Saudi Arabia	Rabigh	Factory Rabigh Steel Industry	EMF	x 1	n/a	plan	n/a	World Steel Capacities
Middle East	Saudi Arabia	Ras Al-Khair	Gulf Tubing Co	EMF	x 1	600	plan	2019	Metal Expert
Middle East	Saudi Arabia	Al-Jubail	Saudi Iron & Steel Co (Hadeed)	Steelmkg	n/a	3 500	plan	2025	Metal Expert
Middle East	Saudi Arabia	Dammam	Al-Qaryan Steel Company	EMF	x 1	300	plan	n/a	Metal Expert
Middle East	Saudi Arabia	Watani Steel II, Riyadh	Taybah Steel	EMF	x 1	1 500	plan	n/a	Metal Expert
Middle East	Saudi Arabia	Riyadh	Rajhi Steel Industries	EMF	x 1	2 000	cancelled	2017	World Steel Capacities
Middle East	United Arab Emirates	Abu Dhabi	BILDICO	Steelmkg	n/a	1 000	postponement	n/a	Metal Expert
Middle East	United Arab Emirates	Jebel Ali, Dubai	Gulf National Steel	EMF	n/a	500	plan	2019	World Steel Capacities
NAFTA	Mexico	Apizaco, Tlaxcala	Grupo SIMEC / Industrias CH	EMF	x 1	600	underway	2018	World Steel Capacities, Company HP
NAFTA	Mexico	Pesqueria, Nuevo Leon	Temium Mexico	EMF	x 2	3 000	plan	n/a	MBR
NAFTA	Mexico	Nuevo León	Frisa	EMF	x 1	350	operating	2016	Platts
NAFTA	United States	Durant, Oklahoma	CMC Steel Oklahoma (Durant)	EMF	x 1	350	operating	2017	World Steel Capacities, Company HP
NAFTA	United States	San Patricio	Tianjin Pipe Group (TPCO)	EMF	x 1	500	postponement	n/a	World Steel Capacities
NAFTA	United States	Louisiana	Benteler Steel/Tube	EMF	x 1	n/a	plan	2018	World Steel Capacities
NAFTA	United States	Montpelier, Iowa	SSAB North American Division	EMF	x 1	1 200	plan	n/a	Metal Expert
NAFTA	United States	Texas	E Unitt Group	EMF	x 2	2 500	plan	n/a	Metal Expert
NAFTA	United States	US Steel	Fairfield, Alabama	EMF	n/a	1 600	plan	n/a	World Steel Capacities
Other Europe	Turkey	n/a	Platinum Demir Celik	IF	x 2	100	postponement	2017	Metal Expert
Other Europe	Turkey	Payas, Hatay	Corbus Celik	EMF	n/a	500	postponement	n/a	Platts
Other Europe	Turkey	Bartın	Mescier Steel Industry & Trade L.C.	EMF	x 1	1 000	postponement	n/a	World Steel Capacities
Other Europe	Turkey	Osmaniye	Yobulan Bastug	EMF	x 1	2 000	plan	cancelled	Platts
Other Europe	Turkey	Canakkale, Biga	icdas	BOF	n/a	2 000	plan	cancelled	Metal Expert
Other Europe	Turkey	Filyos, Zonguldak	Kardemir	BOF	n/a	6 000	plan	cancelled	Platts
Other Europe	Turkey	Orhangazi, Bursa	Asil Celik	EMF	x 1	500	plan	n/a	Metal Expert
Other Europe	Turkey	Aliaga, Izmir	Ege Celik	EMF	x 1	1 200	plan	n/a	World Steel Capacities
Other Europe	Turkey	Izmir	Habas	EMF	x 1	1 500	operating	2017	Metal Expert

Source: Media sources listed in the table.

Annex B. AVAILABLE EVIDENCE OF PLANT LEVEL CLOSURES

The closure information collected in this table is based on plant-level data originally obtained from public and commercial sources, in particular from media reports, but does not represent an exhaustive list of closures. These sources are listed in Table A3.

Table A2. Closure data

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	DETAIL	TYPE OF CLOSURE	CAPACITY	Year	SOURCES
Asia	China	n/a	Anhui Fuxin (安徽富鑫钢铁公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Anhui Jin'an (安徽金安钢铁)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Antai Hebei (河北安泰实业有限公司)	BOF	n/a	n/a	Permanent	970	2016	Wood Machenzie
Asia	China	n/a	Bajiao (德阳八角钢铁)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Baode (鞍山宝得钢铁有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Baogang (包钢集团有限责任公司)	BOF	n/a	n/a	Permanent	450	2016	Wood Machenzie
Asia	China	n/a	Baowu Kungang (宝武集团昆明钢铁集团)	BOF	n/a	n/a	Permanent	1 170	2016	Wood Machenzie
Asia	China	n/a	Baowu Wuhan (宝武集团武汉总公司)	BOF	n/a	n/a	Permanent	2 120	2016	Wood Machenzie
Asia	China	n/a	Baoxin Special (包头市宝鑫特钢有限责任公司)	BOF	n/a	n/a	Permanent	70	2016	Wood Machenzie
Asia	China	n/a	Changping (山西常平集团有限公司)	BOF	n/a	n/a	Permanent	1 200	2016	Wood Machenzie
Asia	China	n/a	Chongqing Yuxi (重庆渝西钢铁集团)	BOF	n/a	n/a	Permanent	100	2016	Wood Machenzie
Asia	China	n/a	Chuanwei (四川川威集团有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Dazhou (四川省达州钢铁集团有限公司)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Delong Aoyu (德龙渊奥宇钢铁)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Donghai (唐山东海钢铁有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Dongshan (河北新武安钢铁集团东山冶金工业有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Fushun Fuxin (安徽铜陵市富鑫钢铁公司)	BOF	n/a	n/a	Permanent	1 200	2016	Wood Machenzie
Asia	China	n/a	Guangyuan Metal Products (廊坊市洗远金属制品有限公司)	BOF	n/a	n/a	Permanent	2 400	2016	Wood Machenzie
Asia	China	n/a	Guofeng (唐山国丰钢铁有限公司)	BOF	n/a	n/a	Permanent	1 700	2016	Wood Machenzie
Asia	China	n/a	Hangzhou (杭州钢铁集团公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Hanzhong (陕钢集团汉中钢铁有限责任公司)	BOF	n/a	n/a	Permanent	350	2016	Wood Machenzie
Asia	China	n/a	HBIS Shijiazhuang (河北钢铁集团石家庄钢铁公司)	BOF	n/a	n/a	Permanent	720	2016	Wood Machenzie
Asia	China	n/a	HBIS Tangshan (河北钢铁集团唐山公司)	BOF	n/a	n/a	Permanent	1 100	2016	Wood Machenzie
Asia	China	n/a	Hebei Xinjin (河北新武安钢铁集团新金钢铁有限公司)	BOF	n/a	n/a	Permanent	450	2016	Wood Machenzie
Asia	China	n/a	Henglong (重庆万州恒隆钢铁公司)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Huale Alloy (连云港华乐合金有限公司)	BOF	n/a	n/a	Permanent	1 150	2016	Wood Machenzie
Asia	China	n/a	Jiangxin (山东临沂江鑫钢铁有限公司)	BOF	n/a	n/a	Permanent	1 050	2016	Wood Machenzie
Asia	China	n/a	Jiaxin (唐山佳鑫钢铁有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Jinxi Iron and Steel (河北唐山津西钢铁)	BOF	n/a	n/a	Permanent	550	2016	Wood Machenzie
Asia	China	n/a	Jiugang Hongxing (酒泉钢铁集团宏兴钢铁股份有限公司(嘉峪关))	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Jiugang Yicheng (酒泉钢铁集团山西翼城)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Jiugang Yuzhong (酒泉钢铁集团甘肃榆中分公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Jiujiang Wire (九江线材钢铁有限公司)	BOF	n/a	n/a	Permanent	450	2016	Wood Machenzie
Asia	China	n/a	Liangang Ruifeng (唐山瑞丰钢铁有限公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	DETAIL	TYPE OF CLOSURE	CAPACITY	Year	SOURCES
Asia	China	n/a	Lueyang (陕西略阳钢铁)	BOF	n/a	n/a	Permanent	800	2016	Wood Machenzie
Asia	China	n/a	Malanshan (马钢集团马鞍山钢铁股份有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Masteel Hefei (马钢集团合肥钢铁集团有限公司)	BOF	n/a	n/a	Permanent	1 700	2016	Wood Machenzie
Asia	China	n/a	Nanchang (江西南昌钢铁有限责任公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Nanfang (河南驻马店南方钢铁有限公司)	BOF	n/a	n/a	Permanent	750	2016	Wood Machenzie
Asia	China	n/a	Pangang Chengdu (鞍钢集团攀钢集团成都钢铁公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Pangang Panzhuhua (鞍钢集团攀枝花钢铁(集团)有限责任公司)	BOF	n/a	n/a	Permanent	1 250	2016	Wood Machenzie
Asia	China	n/a	Pangang Xichang (鞍钢集团攀钢集团西昌钢铁有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Pinggang (方大集团江西萍乡钢铁公司)	BOF	n/a	n/a	Permanent	770	2016	Wood Machenzie
Asia	China	n/a	Pinggang Special Steel (方大集团萍乡乡萍钢特钢有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Puyang (河北新武安钢铁集团普阳钢铁有限公司)	BOF	n/a	n/a	Permanent	430	2016	Wood Machenzie
Asia	China	n/a	Qian'an Jin'an (津安钢铁有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Qianjin (河北霸州前进钢铁)	BOF	n/a	n/a	Permanent	660	2016	Wood Machenzie
Asia	China	n/a	Qinyou (扬州市秦邮特种金属材料有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Quantu (山西泉福钢铁厂)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Rongxin (荣信钢铁有限公司)	BOF	n/a	n/a	Permanent	580	2016	Wood Machenzie
Asia	China	n/a	Sande (临沂三德钢铁有限公司)	BOF	n/a	n/a	Permanent	1 400	2016	Wood Machenzie
Asia	China	n/a	Shagang Xxing (沙钢集团江苏锡兴钢铁有限公司)	BOF	n/a	n/a	Permanent	800	2016	Wood Machenzie
Asia	China	n/a	Shanghai Stainless Steel (宝武集团上海第一钢铁有限公司)	BOF	n/a	n/a	Permanent	1 240	2016	Wood Machenzie
Asia	China	n/a	Shanxi Huanhai (山西环海钢铁)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Shengbao Pipe (河北胜宝钢管有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Shougang Changzhi (首钢长治钢铁有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Shougang Shuicheng (首钢集团贵州水城钢铁(集团)有限责任公司)	BOF	n/a	n/a	Permanent	750	2016	Wood Machenzie
Asia	China	n/a	Shougang Tonghua (首钢通化钢铁集团有限责任公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Shunxin (湖南顺鑫钢铁有限公司)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Siping Modern (吉林四平现代钢铁有限公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Taigang (太原钢铁集团有限公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Taigang New Lingang (太原钢铁集团新临钢钢铁有限公司)	BOF	n/a	n/a	Permanent	1 100	2016	Wood Machenzie
Asia	China	n/a	Tangshan Xingye (唐山兴业工贸有限公司)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Tiangang (天钢集团有限公司)	BOF	n/a	n/a	Permanent	900	2016	Wood Machenzie
Asia	China	n/a	Tianzhu (天柱钢铁集团有限公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Wen'an (河北新武安钢铁集团文安钢铁有限公司)	BOF	n/a	n/a	Permanent	440	2016	Wood Machenzie
Asia	China	n/a	Wenfeng (河北文丰钢铁有限公司)	BOF	n/a	n/a	Permanent	290	2016	Wood Machenzie
Asia	China	n/a	Xilin (黑龙江西林钢铁集团)	BOF	n/a	n/a	Permanent	700	2016	Wood Machenzie
Asia	China	n/a	Xinda (鑫达钢铁有限公司)	BOF	n/a	n/a	Permanent	870	2016	Wood Machenzie
Asia	China	n/a	Xingtai (河北邢台钢铁有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Xingyuan Iron and Steel (襄汾县星原钢铁集团有限公司)	BOF	n/a	n/a	Permanent	800	2016	Wood Machenzie
Asia	China	n/a	Yaxin Zhongsheng (山西中升钢铁有限公司)	BOF	n/a	n/a	Permanent	900	2016	Wood Machenzie
Asia	China	n/a	Yutian Jianbang (玉田建邦实业有限公司)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Zhayi Liancheng (天津轧一联成钢铁有限公司)	BOF	n/a	n/a	Permanent	1 820	2016	Wood Machenzie
Asia	China	n/a	Zongheng Cangzhou (河北沧州纵横钢铁集团有限公司)	BOF	n/a	n/a	Permanent	1 100	2016	Wood Machenzie
Asia	China	n/a	Zongheng Handan (河北邯郸纵横钢铁集团有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Chengdu Metallurgy (成都冶金实验厂有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Handing (内蒙古汉鼎钢铁)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Jiangyin Huarun (江阴华润制钢有限公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Shizi Metal (重庆璧山县狮子金属加工有限责任公司)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Tsingshan Jinhui (青山控股河南金汇特钢)	BOF	n/a	n/a	Permanent	150	2016	Wood Machenzie
Asia	China	n/a	Valin Xigang (江苏菱钢特钢有限公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Xi'an (陕西龙钢集团西安钢铁有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie

22 | RECENT DEVELOPMENTS IN STEELMAKING CAPACITY

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	NUMBER OF EQUIPMENT	DETAIL	TYPE OF CLOSURE	CAPACITY	Year	SOURCES
Asia	China	n/a	Xilin (黑龙江西林钢铁集团)	BOF	n/a	n/a	Permanent	650	2016	Wood Machenzie
Asia	China	n/a	Xindongfang (苏州新东方特钢)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Xinjiang Mixin (新疆闽新钢铁(集团)有限责任公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Dazhan (湖北大展钢铁有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Baowu Baotong (宝武集团南通宝通钢铁公司)	BOF	n/a	n/a	Permanent	350	2016	Wood Machenzie
Asia	China	n/a	Shengtelong (湖州盛特隆金属制品有限公司)	BOF	n/a	n/a	Permanent	270	2016	Wood Machenzie
Asia	China	n/a	Shougang Guiyang (首钢集团贵阳特殊钢有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Shuangyou (南平市双友金属制品有限公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Baowu Shaoquan (宝武集团广东韶关钢铁集团有限公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Xilin Acheng (西林钢铁集团阿城钢铁有限公司)	BOF	n/a	n/a	Permanent	550	2016	Wood Machenzie
Asia	China	n/a	Huaxin Metallurgy (广水华鑫冶金工业有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Wucheng (湖北吴城钢铁集团有限公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Xuzhou Dongnan (江苏徐州东南钢铁有限公司)	BOF	n/a	n/a	Permanent	200	2016	Wood Machenzie
Asia	China	n/a	Shagang Xinui (沙钢集团鑫瑞特钢有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Shunle (武汉顺乐不锈钢有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Yuebei (广东粤北钢铁有限公司)	BOF	n/a	n/a	Permanent	700	2016	Wood Machenzie
Asia	China	n/a	Qilu Special Steel (齐鲁特钢)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Shanghai Stainless Steel (宝武集团上海第一钢铁有限公司)	BOF	n/a	n/a	Permanent	550	2016	Wood Machenzie
Asia	China	n/a	Fushun (东北特殊钢集团抚顺特殊钢股份有限公司)	BOF	n/a	n/a	Permanent	300	2016	Wood Machenzie
Asia	China	n/a	Xiwang Special (西王特钢)	BOF	n/a	n/a	Permanent	120	2016	Wood Machenzie
Asia	China	n/a	Southwest Stainless (四川西南不锈钢公司)	BOF	n/a	n/a	Permanent	1 100	2016	Wood Machenzie
Asia	China	n/a	Dingxin Nickel (福建鼎信镍业有限公司)	BOF	n/a	n/a	Permanent	1 000	2016	Wood Machenzie
Asia	China	n/a	Xuefeng (江苏无锡雪丰钢铁有限公司)	BOF	n/a	n/a	Permanent	600	2016	Wood Machenzie
Asia	China	n/a	Shanghai Special Steel (宝武集团上海特钢公司)	BOF	n/a	n/a	Permanent	400	2016	Wood Machenzie
Asia	China	n/a	Taigang (太原钢铁集团有限公司)	BOF	n/a	n/a	Permanent	270	2016	Wood Machenzie
Asia	China	n/a	Hangzhou (杭州钢铁集团公司)	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Lijin (湖北立晋钢铁集团有限公司(原立晋冶金))	BOF	n/a	n/a	Permanent	500	2016	Wood Machenzie
Asia	China	n/a	Shagang Xixing (沙钢集团江苏锡兴钢铁有限公司)	BOF	n/a	n/a	Permanent	800	2016	Wood Machenzie
Asia	China	n/a	n/a (aggregate)	Steelmkg (not including IF)	n/a	n/a	Permanent	50 000	2017	Ministry of Industry and Information Technology (MIT)
Asia	China	n/a	n/a (aggregate)	IF	n/a	n/a	Permanent	140 000	2017	Ministry of Industry and Information Technology (MIT)
Asia	Japan	Osaka	Kyoei Steel Ltd	EAF	x 1	40t	Permanent	480	2016	Company HP, World Steel Capacities
Asia	Japan	Okajima	Osaka Steel Co., Ltd.	EAF	x 1	40t	Permanent	480	2016	Company HP, World Steel Capacities
Asia	Japan	Kobe Works	Kobe Steel	BOF	x 2	90t	Permanent	1 380	2017	Company HP, World Steel Capacities
CIS	Russia	Vyksa	OMK	OHF	x 2	250 t, 251 t	Permanent	460	2018	World Steel Capacities
CIS	Ukraine	Zaporizhzhya	Metinvest	OHF	x 9	n/a	Permanent	4 700	2020	World Steel Capacities
Europe	Italy	Piombino	Aferpi	BOF	x 3	n/a	Permanent	2 900	2017	Company HP, Metal Expert
Europe	Poland	Dabrowa Gornicza	AlcelorMittal	BOF	x 1	n/a	Others (unidentified)	n/a	2016	World Steel Capacities
Europe	Spain	Asturias (Aviles)	AlcelorMittal	BOF	x 1	n/a	Others (unidentified)	n/a	2016	World Steel Capacities
NAFTA	United States	Ohio	Warren Steel Holdings	EAF	x 1	n/a	Permanent	500	2016	Metal Expert

Note: In column “Type of closure”, the term “Others” refers to a closure that is not necessarily permanent, e.g. the idling or temporary stoppage of the steel facility. The data on nominal crude steelmaking capacity provided for China do not include the production capacity of “illegal” (“违法 Wéifǎ”) induction furnaces, nor does it reflect any changes in steelmaking capacity associated with those furnaces.

Source: Media sources listed in the table.

Annex C. STEELMAKING CAPACITY DATA BY ECONOMY

Table A3. Crude steelmaking capacity developments (in mmt)

	Nominal crude steelmaking capacity					
	2007	2013	2014	2015	2016	2017
Asia	899.0	1 514.3	1 554.9	1 575.4	1 521.6	1 488.9
Non-OECD Asia	712.2	1 297.0	1 337.9	1 359.4	1 306.6	1 275.3
Non-OECD Asia (excl.China, India)	63.7	86.8	89.9	94.8	95.3	102.5
Japan	129.6	131.2	131.1	130.5	129.6	128.2
Korea	57.2	86.0	85.9	85.5	85.5	85.5
China (People's Republic of)	588.5	1 106.2	1 140.0	1 150.1	1 089.4	1 047.9
Chinese Taipei	21.8	29.4	29.4	29.4	29.4	29.4
India	60.0	104.0	108.0	114.5	121.8	124.8
Pakistan	4.0	5.5	5.6	5.9	5.9	6.1
Indonesia	5.9	9.7	9.7	10.9	10.9	10.9
Malaysia	9.0	10.0	10.7	10.7	10.7	10.7
Philippines	1.8	2.1	2.1	2.1	2.1	2.1
Thailand	6.5	9.4	9.9	9.9	9.9	9.9
Viet Nam	4.7	10.7	11.2	13.8	14.3	21.3
Others_Asia	9.9	10.1	11.3	12.2	12.2	12.2
Bangladesh	2.5	2.5	3.7	4.6	4.6	4.6
Cambodia	0.0	0.0	0.0	0.0	0.0	0.0
Hong Kong (China)	0.0	0.0	0.0	0.0	0.0	0.0
Lao People's Democratic Republic	0.0	0.0	0.0	0.0	0.0	0.0
Mongolia	0.1	0.1	0.1	0.1	0.1	0.1
Myanmar	0.1	0.3	0.3	0.3	0.3	0.3
Nepal	0.3	0.3	0.3	0.3	0.3	0.3
Democratic People's Republic of Korea	6.0	6.0	6.0	6.0	6.0	6.0
Singapore	0.8	0.8	0.8	0.8	0.8	0.8
Sri Lanka	0.2	0.2	0.2	0.2	0.2	0.2
Developed Asia	208.7	246.6	246.4	245.4	244.4	243.0
ASEAN-6	28.8	42.6	44.4	48.2	48.7	55.7
CIS	135.0	143.8	144.7	144.7	145.7	145.7
Kazakhstan	6.0	8.2	8.2	8.2	8.2	8.2
Russia	77.0	86.6	87.0	87.0	88.0	88.0
Ukraine	45.5	42.5	42.5	42.5	42.5	42.5
Others	6.5	6.5	7.1	7.1	7.1	7.1
Azerbaijan	1.0	1.0	1.3	1.3	1.3	1.3
Belarus	2.8	2.8	3.0	3.0	3.0	3.0
Georgia	0.6	0.6	0.6	0.6	0.6	0.6
Moldova	1.0	1.0	1.0	1.0	1.0	1.0
Turkmenistan	0.2	0.2	0.2	0.2	0.2	0.2
Uzbekistan	1.0	1.0	1.0	1.0	1.0	1.0

	Nominal crude steelmaking capacity					
	2007	2013	2014	2015	2016	2017
South America	56.7	68.1	68.1	69.0	72.6	73.2
Latin America	59.2	70.8	70.8	71.7	75.3	75.9
Non OECD Latin America	57.2	68.8	68.8	69.7	73.3	74.0
Argentina	6.1	6.7	6.7	6.7	6.7	7.3
Brazil	39.0	48.0	48.0	48.5	52.1	52.1
Chile	2.0	2.0	2.0	2.0	2.0	2.0
Colombia	1.4	2.4	2.4	2.4	2.4	2.4
Peru	1.6	1.6	1.6	2.0	2.0	2.0
Venezuela	6.1	6.2	6.2	6.2	6.2	6.2
Others	3.1	4.0	4.0	4.0	4.0	4.0
Bolivia	0.0	0.0	0.0	0.0	0.0	0.0
Costa Rica	0.0	0.0	0.0	0.0	0.0	0.0
Cuba	0.5	0.7	0.7	0.7	0.7	0.7
Dominican Republic	0.4	0.4	0.4	0.4	0.4	0.4
Ecuador	0.3	0.9	0.9	0.9	0.9	0.9
El salvador	0.2	0.3	0.3	0.3	0.3	0.3
Guatemala	0.5	0.5	0.5	0.5	0.5	0.5
Panama	0.0	0.0	0.0	0.0	0.0	0.0
Paraguay	0.2	0.2	0.2	0.2	0.2	0.2
Puerto rico	0.1	0.1	0.1	0.1	0.1	0.1
Trinidad and Tobago	1.0	1.0	1.0	1.0	1.0	1.0
Uruguay	0.1	0.1	0.1	0.1	0.1	0.1
Middle East	24.5	54.3	59.1	60.9	60.9	63.7
Non OECD Middle East	24.0	53.8	58.6	60.4	60.4	63.2
Iran	12.0	27.0	27.0	28.2	28.2	31.0
Iraq	0.4	1.7	1.7	1.7	1.7	1.7
Israel	0.5	0.5	0.5	0.5	0.5	0.5
Jordan	0.4	0.9	1.1	1.1	1.1	1.1
Qatar	2.8	2.9	3.9	3.2	3.2	3.2
Saudi Arabia	7.4	12.5	12.5	13.7	13.7	13.7
Syrian Arab Republic	0.1	2.7	2.7	2.7	2.7	2.7
United Arab Emirates	0.2	3.0	3.7	3.7	3.7	3.7
Others	0.8	3.2	6.1	6.1	6.1	6.1
Afghanistan	0.0	0.0	0.0	0.0	0.0	0.0
Bahrain	0.0	1.0	1.0	1.0	1.0	1.0
Kuwait	0.0	1.4	1.4	1.4	1.4	1.4
Lebanon	0.1	0.1	0.3	0.3	0.3	0.3
Oman	0.5	0.5	3.2	3.2	3.2	3.2
Yemen	0.1	0.3	0.3	0.3	0.3	0.3

	Nominal crude steelmaking capacity					
	2007	2013	2014	2015	2016	2017
Africa	30.5	33.9	34.6	35.7	35.7	36.6
Algeria	2.5	3.7	3.7	3.7	3.7	3.7
Egypt	8.0	10.5	11.2	12.3	12.3	13.2
Libya	1.6	1.6	1.6	1.6	1.6	1.6
Morocco	0.8	2.7	2.7	2.7	2.7	2.7
Nigeria	2.7	2.9	2.9	2.9	2.9	2.9
South Africa	13.0	10.3	10.3	10.3	10.3	10.3
Zimbabwe	1.0	1.1	1.1	1.1	1.1	1.1
Others	0.9	1.1	1.1	1.1	1.1	1.1
Congo	0.1	0.1	0.1	0.1	0.1	0.1
Côte d'Ivoire	0.0	0.0	0.0	0.0	0.0	0.0
Ethiopia	0.2	0.2	0.2	0.2	0.2	0.2
Ghana	0.2	0.2	0.2	0.2	0.2	0.2
Kenya	0.1	0.1	0.1	0.1	0.1	0.1
Mauritius	0.0	0.0	0.0	0.0	0.0	0.0
Mozambique	0.0	0.0	0.0	0.0	0.0	0.0
Sudan	0.1	0.1	0.1	0.1	0.1	0.1
Tanzania	0.0	0.0	0.0	0.0	0.0	0.0
Togo	0.0	0.0	0.0	0.0	0.0	0.0
Tunisia	0.1	0.2	0.2	0.2	0.2	0.2
Uganda	0.2	0.2	0.2	0.2	0.2	0.2
Zambia	0.0	0.1	0.1	0.1	0.1	0.1

Europe	276.6	289.4	287.6	281.6	276.6	275.2
OECD Europe	258.6	275.1	273.3	267.3	262.3	260.9
Non-OECD Europe	18.0	14.3	14.3	14.3	14.3	14.3
Other Europe	39.9	57.8	58.0	56.0	56.0	57.5
EU-28	236.7	231.6	229.6	225.6	220.6	217.7
Turkey	32.0	49.2	49.4	47.4	47.4	48.9
Norway	0.8	0.8	0.8	0.8	0.8	0.8
Switzerland	1.4	1.4	1.4	1.4	1.4	1.4
Bosnia and Herzegovina	2.0	2.0	2.0	2.0	2.0	2.0
Bulgaria	3.2	1.2	1.2	1.2	1.2	1.2
Croatia	0.2	0.5	0.5	0.5	0.5	0.5
Montenegro	0.4	0.4	0.4	0.4	0.4	0.4
Romania	9.0	6.2	6.2	6.2	6.2	6.2
Serbia	2.2	2.7	2.7	2.7	2.7	2.7
Others	1.2	1.4	1.4	1.4	1.4	1.4
Albania	0.7	0.9	0.9	0.9	0.9	0.9
Cyprus	0.0	0.0	0.0	0.0	0.0	0.0
Latvia	0.8	0.9	0.9	0.9	0.9	0.9
Former Yugoslav Republic of Macedonia	0.5	0.5	0.5	0.5	0.5	0.5

	Nominal crude steelmaking capacity					
	2007	2013	2014	2015	2016	2017
NAFTA	153.9	158.0	158.2	157.2	158.5	158.9
United States	113.4	113.5	113.5	111.3	112.3	112.6
Canada	19.0	20.5	20.7	20.7	20.7	20.7
Mexico	21.5	24.0	24.0	25.2	25.6	25.6
Oceania	9.1	6.4	6.4	6.4	6.4	6.4
Australia	8.1	5.4	5.4	5.4	5.4	5.4
New Zealand	1.0	1.0	1.0	1.0	1.0	1.0
OECD/EU economies TOTAL	610.9	659.2	657.4	649.4	644.7	642.3
Non OECD/EU economies TOTAL	976.9	1 611.6	1 658.8	1 684.2	1 635.9	1 608.9
WORLD TOTAL	1 587.7	2 270.8	2 316.2	2 333.6	2 280.7	2 251.2

Note on China: The data on nominal crude steelmaking capacity provided for China does not include production capacity by "illegal" ("违法 *Wéifǎ*") induction furnace, nor does it reflect any changes in steelmaking capacity associated with "illegal" ("违法 *Wéifǎ*") induction furnaces.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Note by Turkey:

The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus" issue.

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

The European Union is a member of the Steel Committee and accordingly this data includes all EU Member States.

Source: OECD Secretariat

Annex D. WORKING DEFINITION USED

Steelmaking capacity

The OECD Secretariat employs a definition of nominal crude steelmaking capacity based on maximum theoretical equipment capacity.⁹ This definition does not take into account yield losses, maintenance and other factors affecting the productivity of installed steelmaking equipment. Therefore, steelmaking capacity figures provided by the OECD should not be regarded as effective capacity.

Capacity is defined in volume (tonnes) and annual capacity data figures reflect all existing steelmaking capacity at the end of a calendar year.

Steelmaking equipment

The OECD Secretariat considers as steelmaking equipment any equipment used to produce crude steel. The definition excludes iron-making equipment considered here as upstream, as well as casting, rolling or finishing equipment considered here as downstream. More specifically, the following equipment types are considered as crude steelmaking:

Type	Code
Electric arc furnace	EAF
Energy Optimising Furnace	EOF
Induction furnace	IF
LD Basic Oxygen furnace	BOF
Open hearth furnace	OHF
Steelmaking - not specified	STEELMKG

Assessing capacity developments

The three databases described in this paper are used to assess capacity developments. Changes in capacity are derived by taking into account new capacity additions and permanent closures in a given economy. In order to assess potential gross capacity additions in the future, investment projects are classified as “underway” or “planned”. A project classified as “underway” is one which is under construction or for which contracts for equipment have been awarded and a major financial or state commitment has been made. “Planned” projects are more uncertain because they are either at the feasibility or early planning stage, yet to receive financial or state backing, or not scheduled for completion at a specified time. The classification of projects and comments on their progress do not in any way represent a judgement or imply a view on the advisability or feasibility of the projects.

Because closures cannot be forecast, the tables in this document provide only potential gross capacity additions and do not provide projections of net changes in capacity. It should be noted that planned or underway investments are sometimes altered due to changes in market conditions. Postponements refer to projects that were put on hold for a definite or indefinite period, while cancellations are previously announced projects that will no longer be implemented.

Steelmaking capacity closures

The OECD Secretariat distinguishes between "permanent" and "temporary" steelmaking capacity closures. Permanent closures of capacity are considered to involve dismantling and scrapping of the equipment used for producing crude steel, or otherwise rendering such equipment permanently unusable for manufacturing crude steel. Temporary closures entail measures other than permanent closures as defined above, whereby production can be resumed in the future. Temporary closures include, for example, the idling of a plant's furnace. Only permanent closures are used for the purpose of calculating existing capacity. In practice, when compiling the database, it is unfortunately not always possible to understand from media sources if a closure is only temporary or permanent. This explains why the field value of "Type of closures" is sometimes set to "Others (unidentified)" in the OECD database on closures.

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Endnotes

- ¹ This document, as well as any data and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.
- ² The previous figure was based on information available up until the end of June 2017. The new estimate for capacity in 2016 and 2017 is based on information made available up to December 2017 and reflects comments and modifications from OECD Steel Committee delegates after discussion on a draft of this report at the Steel Committee meeting in March 2018.
- ³ The European Union (EU) is a member of the Steel Committee and accordingly this data includes all EU Member States.
- ⁴ National Development and Reform Commission (NDRC) has announced the closure target of 2017 on 17 April 2017 at their website (NDRC, 2017_[2]), however this website is not available as of 10 August 2018.
- ⁵ According to the report by the China Iron & Steel Association (CISA), over 500 IF steel producers had been identified nationwide. Vice chairman of CISA, Mr. Chi Jingdong, said at a press conference of CISA in Beijing on April 26 2017 (Platts, 2017_[5]).
- ⁶ According to the NDRC's announcement on 17 April 2017, "Capacity of IFs shall be completely out until end of June 2017 in accordance with the law" is specified as one of "Target requirements", apart from the closure target of 50 mmt in 2017 (NDRC, 2017_[2]).
- ⁷ Kobe Steel has strengthened production capacities at Kakogawa works, by the relining of its blast furnace and adding a new continuous bloom caster (Platts, 2017_[12]).
- ⁸ According to World Steel Capacities Database (compiled by Metal Expert) on 22 December 2017, installation of two EAFs (with each 1.0 mmt) by Aferpi are described as being planned and expected to be commissioned in 2018 and 2019 (Metal Expert, 2017_[19]).
- ⁹ This definition is also commonly referred to as nominal, rated or nameplate capacity.